BRITISH HONDURAS
REPORT OF
THE DEPARTMENT OF AGRICULTURE
FOR THE YEAR 1942

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Section I

General Review of Crops including Exports.

Weather Conditions.

1. The whole year was very wet, the rainfall for the Colony being above average. The early rains experienced resulted in a reduction of the land cleared for crops like corn and rice due to the difficulty of getting the felled bush burnt.

The very wet weather experienced late in the year resulted in (1) some rotting of root crops, (2) rotting and germination of corn on the cob in the field before it could be reaped, (3) great difficulty in drying the reaped corn, (4) poor germination of the bean crop and (5) rotting and germination of the beans before and after reaping.

A hurricane struck the Colony in November doing particular damage in the Northern District, crops and buildings being blown down, the heavy flooding which followed causing further damage.

General Situation.

2. The value of exports of Agricultural produce continued to decline, the value of these exports for the past three years being:—1940 = $287,629, 1941 = $249,578, 1942 = $197,168. This decline was mainly due to shipping difficulties but also to hurricane damage to citrus, banana and coconut plantations, and to Panama Disease and Sigatoka Leaf Spot reducing the area under bananas.

The production of local foodstuffs for local consumption, following the severe setback received in 1941 from locust and hurricane damage, was again seriously reduced by hurricane, flood and locust damage, and also by the importing of unsuitable corn seed from Guatemala. This seed was imported to make good the shortages caused by the 1941 losses and turned out to be unsuitable for our soil and climatic conditions. The hurricane damage was most severe in the Northern District where practically the whole of the corn crop was wiped out; the other districts did not suffer as badly. The locusts only attacked crops in the Cayo District, damage was not as severe as in the previous year largely on account of the steps taken to combat them. Although the locusts did not actually invade any of the other districts during 1942, the knowledge that they were still in the colony caused many planters to plant smaller areas than they would have done otherwise.

The distribution of unsuitable seed corn affected the whole Colony, particularly the Belize and Stann Creek Districts. Due to these reverses corn production was about 50% below normal, rice 55% below the previous year and beans 60% below normal.

Table I gives food imports, a great part of which could be replaced by locally grown food.

Table II gives exports of Agricultural Produce for 1942.

Condition of Chief Agricultural Crops.

3. *Bananas*: Exports have continued to decline due to

(1) A shortage of shipping facilities

(2) The spread of Sigatoka Leaf Spot and Panama Disease

(3) Hurricane damage

and because of these reasons, particularly the shipping shortage, very little new planting has taken place, many plantations are being neglected and abandoned and no Sigatoka control is being carried out.

There has been an increase in the local demand for green bananas for food. Due to the rationing of rice, the failure of the corn crop and the periodical shortages of imported foods, especially flour. The increase in the cost of these other foods has also helped to increase this demand for bananas.

Exports of banana for the past four years is as follows (in bunches):

1939	1940	1941	1942
522,578	437,432	337,499	97,414

The output of plantains decreased, principally on account of the hurricanes of 1941 and 1942. There was not enough to supply all local demands.

Exports of plantains for the past four years is as follows: (in numbers)

1939	1940	1941	1942
23,700	52,200	157,597	16,265

4. *Coconuts & Copra*: In spite of hurricane damage the total exports are about the same as for 1940 and 1941.

A large part of the actual production is kept in the Colony for coconut oil and soap manufacture. This local consumption is estimated at about 2,000,000 nuts per year.

The hurricane of November, 1942, did more damage to the coconut producing areas of the Colony than the one of September, 1941, so that a reduced crop in 1943 can be expected.

Prices for coconuts and copra have been better than for some years past. Exports of coconuts and copra for the past four years is as follows:—

	1939	1940	1941	1942
Coconuts (No.)	2,846,550	2,681,509	2,444,508	1,892,153
Copra (lb.)	996,419	186,814	246,750	548,203
Total as Coconuts (No.)	5,536,881	3,185,906	3,110,733	3,372,301

The decline in exports after 1939 is largely due to the manufacture of soap in the Colony which started about that time.

There has been an increase in the area planted with coconuts, and on account of the better prices now obtained many partly abandoned and neglected plantations are being brought back into cultivation.

It is expected that the output of coconuts will increase following recovery from hurricane damage.

5. *Citrus*: This industry continues to be the hardest hit by the war. The trees made a good recovery from the locust and hurricane damage of 1941, and the main citrus area, Stann Creek, was not seriously affected by the hurricane of November 1942. The estimated crop on the trees for 1942 for Stann Creek, was over 100,000 cases, but only about 20,000 cases were reaped. This was principally due to (1) No shipping facilities for fresh fruit (2) No cans for canning (3) Very little shipping space available for grapefruit pulp in barrels. Over 7,000 barrels of pulp were manufactured but only 3,800 were exported during the year.

The prospects for 1943 are very poor and it looks as if this industry which was so promising before the war, employed most of the labour in the district and was the chief source of income to the Stann Creek District, will go bankrupt, resulting in the planters being unable to maintain their groves until such a time as they can export fruit again, unless they are given some help, financially or by some means being found to dispose of their crops.

The estimated crop, Stann Creek District, for 1943 is 150,000 to 200,000 cases of fruit.

The citrus in the Northern District was severely damaged by the hurricane of November 1942, and the crop for 1943 will be very small.

6. *Cassava*: The starch industry is at a complete stand still. The factory did not operate at all during 1942 and no cassava was planted for delivery to the factory. There has beeen an increase in the area planted for domestic use, starch and cassava bread being made for local consumption. The demand exceeded the supply due to the cassava not having recovered from the locust and hurricane damage of 1941. There should be an increase in production in 1943.

7. *Sugar Cane*: The 1941-42 Crop for the Corozal District was a good one, the factory producing 1,438 tons of sugar, only 32 tons short of the 1941 record. Three small factories also operated with satisfactory results, producing rum and brown sugar.

The 1943 crop suffered superficial damage from the hurricane but since favourable growing conditions have continued it is now thought that production will be about the same as for 1942.

In the South five small mills operated and there has been an increase in the area under cane.

8. *Rice*: The output of rice padi as guaged by the purchases of padi by the Board of Agriculture declined by over 50% from 1941. 266,278 lb. were purchased in 1942 as against 588,436 lb. in 1941. This is mainly accounted for by the adverse weather conditions, which resulted in poor germination and poor growth of the B.H. Creole Rise, the main variety planted. Where the long term British Guiana varieties were planted results were much more satisfactory. With the better price now offered for padi and the decline of the banana industry it is expected that a larger area of rice will be planted in 1943 and that the output will be much higher.

9. *Maize*: As already stated in this report the corn crop for 1942 was very poor, due to hurricane and locust damage, adverse weather conditions and poor seed.

Purchases of locally produced corn by the Board of Agriculture for the last three years is as follows: (in lb.)

1940	1941	1942
247,621	73,802	23,012

The estimated normal yield for the Colony is 5,500 tons per year. The estimated yield for 1942 was 2,500 tons.

The majority of this corn is consumed by the growers only between 2 and 3% being sold to the Board of Agriculture in a normal year. The Board of Agriculture imported corn from Guatemala, San Salvador and Jamaica during 1941 and 1942 to make good some of the shortage. Imports of corn in lb.

1941	1942
341,365	1,569,342

It is hoped that with reasonable weather conditions in 1943, the Colony will become self-supporting in corn again. The Board of Agriculture has offered a better price for corn and a better supply of seed was available.

10. *Ground Provisions*: There has been an increase in the area under these crops. In the locust devastated areas cocos in particular have been planted to replace corn. In the banana growing areas, yams, cassava, cocos and sweet potatoes are being planted, principally to provide food for the growers but there is an increasing surplus for sale in the towns. Ground provisions suffered considerable damage from the hurricane and floods which followed, especially on the low-lying areas. Planting material

of the better varieties of yams is still scarce. Attempts are being made to overcome this shortage by increased plantings at the Agricultural Stations.

11. *Pulses*: Early types, Black Eye and Green Gram did well, the returns per acre being good, but only small amounts were planted. The main reasons for this were: Green Gram is only a recent introduction and is not well known yet and consequently is only grown on a very small scale. Black Eye Bean seed was difficult to get and only a limited amount was available for distribution.

Late types, Red Kidney, Black Beans, Baby Red, and Pink Beans. A far larger area than ever before was planted in these beans but adverse weather conditions ruined the crops. Continual wet weather resulted in (1) poor germination (2) poor growth from water-logging (3) knocking off of flowers by heavy rain and wind. (4) germination of seed in the pod before reaping (5) great difficulty in drying reaped seed resulting in rotting and germination of seed after reaping. (6) increased spread of fungus disease. During the past ten years returns have varied between 400 and 1300 lb. per acre. This year the average was 200 lb. per acre.

The only variety that stood up to the adverse conditions was the "Baby Red Beans" from Guatemala and arrangements are being made to increase the area under this variety.

12. *Vegetables*: The hurricane of November ruined the vegetable crop of the Northern District, the main vegetable producing area of the Colony. There has been a slight increase in vegetable production over the rest of the Colony but it is still irregular and seasonal, the main season being the "winter" months of November to April.

Livestock.

13. *Cattle*: The number of cattle in the Colony has increased a little but the demand for beef animals still exceeds the supply, which demand has increased due to the shortage of imported "salted meats". The number of cattle imported for food and breeding during the past four years is as follows:

	1939	1940	1941	1942
For Food	812	151	650	755
For Breeding	—	—	189	94
TOTAL	812	151	839	849

The production of milk for Belize is still increasing but the demand is limited as the greater part of the population prefer "canned" milk. Production in the Districts is limited due to transport difficulties. Some cheese and butter is being produced for sale in the Cayo District, otherwise production is for "home" consumption.

14. *Pigs*: There is still a shortage of pigs caused by the shortage of food after the locusts and hurricane, especially in the north of the Colony. Production has in-

creased in the Toledo District which district did not suffer to the same extent as other parts of the Colony from locusts and hurricane damage. A good corn crop in 1943 will go a long way towards increasing pig production.

15. *Poultry*: The same applies to poultry as to pigs. The continued shortage of corn has resulted in a reduced number of poultry being kept and until the Colony is again self-sufficient in corn there will be a shortage of eggs and table-birds.

Pests—Diseases.

16. *Locusts*: Swarms of the South American Locust, Schistocerca paranencis Burmeister, invaded the Colony again, but were confined principally to the Cayo District, only small swarms which did very little harm being reported from the other Districts.

From reports received it appears that these locusts must have spent the winter months of (December, January, February) 1941-42 on the mountain Pine Ridge from which they then moved into the cultivated areas of the Cayo District in March and April, 1942, flying mainly in a North-easterly direction.

Other reports indicate that some swarms may have come in from the Peten District of Guatemala in May and these when first seen were flying from East to West.

Once in the cultivated areas the flying swarms did not appear to go in any definite direction, but to wherever there were plantations.

Egg-laying was first reported in March and hoppers hatching out in April, mating and egg-laying appears to have continued until October.

The general movement of the hoppers was from East to West. By the end of December all had practically disappeared.

Considerable damage was done to the corn and beans resulting in about a 25% reduction to these crops. It is thought that the damage would have been much more but for the prompt action taken by the District Commissioner and Agricultural Department to combat the locusts, gangs being employed to dig up eggs and spray and burn hoppers.

Section II

Work of the Department of Agriculture.

17. The Assistant Agricultural Officers acted as Assistant Supply Officers for their various districts during the year.

The Agricultural Officer was transferred to Kenya on 5th March, 1942 and the Conservator of Forests acted as Agricultural Officer until 17th November, 1942 when the new Agricultural Officer arrived in the Colony. The Acting Agricultural Officer acted as Chairman of the Board of Agriculture and the Food Production Committee. The Food Production Committee submitted proposals to Government for increasing local food production and improving local agriculture generally, which resulted in a

scheme being forwarded to the Secretary of State for the Colonies asking for a grant of £35,000 under the Colonial Developement and Welfare Act, 1940 to carry out the proposals.

18. The Assistant Agricultural Officer, Northern District served on the Food Production Committee and was in charge of Hurricane and Locust Relief Work in his District.

The Assistant Agricultural Officer, Stann Creek was in charge of Relief Work in his District and supervised Departmental Work in the Toledo and Cayo Districts.

19. As a result of the locust and hurricane damage, relief work had to be undertaken on a large scale, especially in the Northern District. Relief Farms were run in the Northern, Cayo, Belize and Stann Creek Districts and large quantities of corn were distributed for food, free or at reduced prices.

20. *Land Inspection*: Thirteen lots of land were inspected for granting of title, ten being recommended.

Northern District.

21. *Sugar Cane*: Multiplication plots continued. Varietal trial planted and two N.P.K. Manurial trails started, one on Plant Cane and the other on Ratoons.

"Seed" of P.O.J. 2883, which proved to be superior in previous trials, being distributed, and the cane planters are putting in increased areas of this variety.

22. *Maize*: The continuous planting of maize started in 1939 was continued, but the block was sown with imported Guatemala Seed which grew very strongly but bore very few ears.

23. *Pulses*: Mung beans proved to be a reliable and quick crop under wet conditions and their use as an inter-crop for maize and ground provisions in May can be recommended.

Further Trials with R.K., Pink and Guatemala Beans were planted in November, but excessive wet conditions ruined the crop.

24. *Vegetables*: The hurricane of November, 1942 damaged all crops and results were very poor.

25. *Ground Provisions*: Multiplication Plots of Yams and sweet potatoes planted.

26. *Fodder Grasses*: Area increased. Being cut for stall feeding of cattle, guinea grass and para grass giving good results under this method of feeding.

27. *Citrus*: Root stock observation Plots maintained. The Sour Orange Root Stocks stood up to the Hurricane better than any of the others.

28. *Tobacco*: Seed arrived too late for 1942 Cropping season and what was sown was seriously damaged by the hurricane.

29. *Extension Work*: Six Communal Farms were run as relief work for persons suffering loss through locust and hurricane damage. They also served as Demonstration Farms and results were encouraging.

The whole district was toured regularly, inspecting hurricane and locust damage and supervising relief work.

30. *Livestock*: Work continued on the building up of half-bred Berkshire boars for distribution, three villages were supplied during the year.

31. *Education*: For the second year a teacher's Vacation Course in Agriculture was held at the Corozal Station in May. Twenty-five Teachers attended. A Mid-day meal was provided each day made up entirely of locally produced foodstuffs.

The School Gardens have not received as much attention as in past years due to the amount of relief work carried out during the year.

Stann Creek District.

32. *Cassava*: (1) Multiplication Plots, (2) Varietal Trials, (3) N.P.K. Trials, (4) Lime, F.Y.M. and N.P.K. Trails, (5) Planting Distance Trails and (6) Time of reaping Trails reaped and new ones laid out and planted.

Damage from locusts and hurricane in 1941 upset the results of the Trials planted in 1941 and reaped in 1942. All yields were below average but the varieties imported from Malaya were superior to the others. In the 1941-42 Varietal Trials Aipan Mangi averaged 11,620 lb. per acre and in the 1942-43 Trials 25,781 lb. per acre.

The N.P.K. Trials and the N.P.K. Lime and F.Y.M. trials for 1941/42 and 1942/43 showed no significant difference for the different treatments. Possible reasons for this are (1) the hurricane and locust damage in 1941. (2) excessive wet weather causing severe leaching in 1942. From the results obtained so far, phosphates and then Nitrogen gave the best returns in the single element trials. And in the Lime, F.Y.M.&N.P.K. Trials the Complete N.P.K. artificial fertilizer gave better results than F.Y.M. dressings. Lime and Potash did not appear to improve the yield.

In the planting distance Trials, the 1941/42 results showed the wide spacing as superior and in the 1942/43 Trials the narrower spacing was superior. This is probably accounted for by the fact that the variety planted in 1941/42 (New Green) tends to have a more spreading growth than the variety (Parasol) used in 1942/43.

33. *Citrus*: The essential long term trials on root stocks and manurial and cultural trials were maintained. In the root stock trials the local lemon has proved most unsatisfactory for grapefruit, being incapable of standing the weight of the fruit, the trees falling over easily. In the manurial and cultural trials the trees are recovering from the locust and hurricane damage but no differences due to the different treatments can be seen. The varietal observation and multiplication plots have been put under pasture to provide more grazing for stock and cut down maintenance costs.

34. *Beans*: Varietal, planting distance, and manurial trials of the late varieties

planted, results were inconclusive due to the very poor yields obtained on account of the excessively wet weather. With regard to the early types of beans, the Mung Bean proved satisfactory as a pure crop or as an intercrop for rice (in drills) maize and ground provisions.

35. *Ground Provisions*: Varietal trial of sweet potatoes continued. Stann Creek No. I, Local Red, and Red Nut have proved to be the best of the ten varieties under trial. Multiplication Plots of cocos, dasheen, yams and badus planted.

36. *Other Crops*: Observation and multiplication plots of the following maintained or planted:— Coffee, mangoes, coconuts, miscellaneous fruit and economic trees, pineapples, fodder, prasses, banana, plantain, manilla hemp, arrowroot, ginger, etc.

37. *Extension Work*: Three Communal farms were run as relief work for persons suffering loss through locust and hurricane damage. They were not very successful and were shut down as soon as possible as the average local inhabitants idea of "relief" is money for nothing. Regular inspections were made of all plantations that received seed (corn, rice or beans) on loan. The two Demonstration Farms at Pomona and the Carib Reserve were continued. The rotation on both farms has been changed to include more rice and less cassava and ground provisions. Severe flooding ruined most of the crops in the Carib Reserve and it is expected to do better under rice. On the Pomona Farm the inclusion in the rotation of two years under Pigeon Peas appears to be definitely improving the fertility of the land as crop yields are improving. Part of the low-lying land is being tried under permanent rice.

38. *Livestock*: A small herd of milk cattle maintained, milk records kept and trials made with local foods. A Berkshire boar kept for servicing of local planters' sows and half-breds produced for distribution to local planters.

Toledo District.

39. *The Rice Station*: Rice varietal, cultural and manurial trials continued. Multiplication Plots planted. Multiplication plots of ground provisions planted.

40. *The Rice Mill, Punta Gorda*: 154,339 lb. padi were purchased during the year as compared with 507,453 lb. in 1941. 322,792 lb. of padi were milled yielding 190,544 lb. of rice. 16,450 lb. of seed padi were loaned to growers.

41. *Extension Work*: The Rice demonstration plot on the San Antonio Swamp was maintained. Rice has now been grown successfully for five years on this land. Other rice reserved were maintained and efforts made to get planters to grow rice in the more suitable areas. Loans to growers amounted to $450 to 31 persons in 1942 of which $268 has been repaid. Repayment of outstanding loans for previous years amounted to $535.25.

42. *Improvement of Village Pigs*: The half-bred Berkshire boars supplied to the Indian Villages have been beneficial to pig breeding in these areas but are now becoming too big and heavy for the local sows and will have to be replaced with younger and lighter animals.

Belize District.

43. *The Belize Rice Mill and Drying Kiln*: Again the amount of local produce

handled was curtailed due to locust and hurricane damage. 23,012 lb. of corn was purchased locally and 1,569,342 lb. imported from Guatemala, San Salvador and Jamaica. The output of corn grits and meal increased to 60,761 lb. as compared with 47,627 lb. in 1941.

A total of 58,100 lb. bean seed (Red Kidney, Pink, Guatemala Red and Black Eye) were distributed on loan.

44. *Rice Milling, Belize*: 167,193 lb. of padi milled yielding 103,854 lb. rice.

45. *Extension Work*: Two Relief Farms to help persons suffering losses from hurricane and locust damage were run. Further aid was given in wee-wee ant control and regular inspections were made of all areas by the Jr. Agricultural Instructor.

Cayo District.

46. *The Demonstration Farm*: The 10 acre Demontration Farm was continued, but the system of running has had to be changed. It was found that under continual arable farming certain weeds were becoming uncontrollable so the rotation has been changed to include three years under pasture.

Interest in cattle ploughing continues and more planters are starting to plough their own land.

47. *Extension Work*: Five Relief Farms to help persons suffering losses from locust and hurricane damage were run. These also served as demonstration Farms. A large part of the Department's efforts were concentrated on locust control with results that were satisfactory. A small plot was started near Cayo town to propagate citrus and other fruit trees for distribution.

R. A. KITCHING,
Acting Agricultural Officer.

Table I

IMPORTS OF FOODSTUFFS

1942

Commodity	Quantity	Value
Cattle (No.)	849	25,925
Butter (Cwt)	874¼	33,713
Butter Substitutes (Cwt)	1,737¾	26,380
Cheese (Cwt)	519	18,934
Rice (Cwt)	15,593	82,665
Flour, Wheaten (Bags of 196 lb.)	39,000	191,171
Beans & Peas (Cwt)	5,194¼	43,385
Farinaceous Preparations (Cwt)	1,064¼	11,467
Lard and Loose Substitutes (Cwt)	4,229½	67,028
Beef in Barrels (Cwt)	557	11,159
Pork various (in barrels) (Cwt)	2,287½	42,798
Milk, Condensed & Unsweetened (Cwt)	12,547	185,488
Onions (Cwt)	2,049¾	12,310
Milk Powder (Cwt)	135½	6,246
Irish Potatoes (Cwt)	3,227½	15,101
Eggs (Doz)	5,441	1,719
Pigs (No.	16	222
Corn (Cwt)	14,443	34,527
TOTAL		$810,238

TABLE No. 2.

AGRICULTURAL PRODUCE: EXPORTS 1942.

PRODUCE	*Destination*	*Quantity*	*Value* $
Coconuts (Nos)	U.S.A.	1,892,158	52,891
	Total	1,892,158	52,891
Copra (lb)	U.S.A.	33,600	1,425
	Mexico	116,367	5,943
	Colombia S. A.	398,236	31,528
	Total	548,203	38,896
Bananas (bunches)	U.S.A.	97,414	34,983
	Total	97,414	34,983
Plantains (bunches)	U.S.A.	16,265	125
	Total	16,265	125
Grapefruit (Fresh) (Cwt)	Mexico	118	326
	Total	118	326
Grapefruit (Pulp) (Cwt)	U.K.	1,002	3,607
	Jamaica	14,313	51,688
	Total	15,315	55,295
Grapefruit (Juice) (Cwt)	Bermuda	147	758
	Total	147	758
Grapefruit (Canned) (Cwt) ..	Bermuda	40	202
	U.K.	428	1,942
	Total	468	2,144
Oranges (Fresh) (Cwt)	Mexico	459	1,085
	Total	459	1,085
OTHER AGRICULTURAL PRODUCTS			
Arrowroot, Macaroni, Starch & Sago (lb.)		338	2,279
Poultry (No.)		660	243
Eggs (Doz.)		1,046	337
Rum (Gals.)		45	45
Candles (lb.)		3,273	673
Cocoa Raw (cwt.)		64	446
Common Soap (lb.)		887	6,605
Leather (cwt.)		1	35
TOTAL AGRICULTURAL PRODUCE			$197,168